Lecture 17
Complex & Creative Labor
(New Divisions of Labor)
Complex & Creative Labor

I. Goods & Services
II. Managerial Labor
III. Auxiliary Labor
IV. Creative Work
I. Goods & Services

A. Goods vs. Services
B. A World of Goods
C. Service Sectors
D. Occupations
Goods

- Tangible objects
  - Even if very small
- Most production » goods
  - Why?
- Advantages of goods
  - Moveable & own-able
  - Tangible & reproducible
  - Mass production & labor productivity
‘Services’

- Popular definition (also census!) - *incoherent*
  - non-manufacturing or non-production or non-P+C
  - e.g. Wikipedia: agriculture (0.9%), industry (20.6%), services (78.5%)

- Service = no tangible product
  - Working directly for/on someone
    - E.g., haircut, performance, health care, teaching*

- NOT services (examples)
  - Retail, restaurants, hotel rooms, car repair
I. Goods & Services

A. Goods vs. Services
B. A World of Goods
C. Service Sectors
D. Occupations
Goods Production

- Production Sectors
  - Manufacture + Mining + Agriculture + Construction
  - [+ Utilities]

- Share of US economy
  - In the Past: peaked c. 1920 @ 40%
  - Today: c. 25%
    - Manufacturing = 16%
    - Mining & Agl = 4%
    - Construction = 5%

- *Share declines with rising labor productivity*
Goods Circulation

- Mass production » mass circulation of goods
  - Rises with productivity (total output)

- Distribution (transport, storage & logistics)
  + Retailing = 20% of GDP/jobs

- Production + circulation = 45% of jobs
  - Bigger than most people think
I. Goods & Services

A. Goods vs. Services
B. A World of Goods
C. Service Sectors
D. Occupations
What’s left? (The other 55%...)

- **Service sectors = 35%**
  - Business services = 15% (*today’s lecture*)
  - Consumer services (*no lecture*)
    - Entertainment + domestic + personal services = 5%
    - Health & education* = 15%

- **Not Services**
  - Finance (*‘financial services’*) = 5% (*lecs 14-15*)
  - Government = 15% (*no lecture*)
Shift of US economy

- Shifting *social* division of labor
- I.e., industry mix

**The Decline of Manufacturing**

The percentage of U.S. workers involved in durable-goods manufacturing has shrunk to less than half its 1965 level, while that of several service industries has doubled.

**SHARE OF EMPLOYMENT**

<table>
<thead>
<tr>
<th></th>
<th>1965</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durable-goods manufacturing</td>
<td>19%</td>
<td>8%</td>
</tr>
<tr>
<td>Professional and business services</td>
<td>8%</td>
<td>15%</td>
</tr>
<tr>
<td>Education and health care</td>
<td>7%</td>
<td>16%</td>
</tr>
</tbody>
</table>

Source: Bureau of Labor Statistics
Geography & Social DOL

US & UK vs. Germany & Japan
- Different shares of manuf., transport, ‘services’

Chart 2.10
Manufacturing’s Share of GDP in Selected Countries

Where Virginia Works
Employment by Sector for Virginia and the US, 2007

Source: EPI analysis of Current Employment
I. Goods & Services

A. Goods vs. Services
B. A World of Goods
C. Service Sectors
D. Occupations
Occupational mix

- **Occupations = Detail divisions of labor**
  - Most labor makes NOTHING tangible
    - i.e., no final good or service
  - And/or provides input to other labor
    - i.e., ‘production systems’ (lecture 8)
    - i.e, ‘social labor’ - K. Marx

- **Why?**
  - Social labor is more productive
  - Drive to raise productivity (industrialization)
Basic & non-basic labor

- Basic labor
  - Work directly on good or service
  - Shrinking with rising productivity

- Non-basic labor
  - Indirect labor inputs
  - Non-basic labor is growing

- Blue collar/white collar
  - Popular terms for shifting occupational structure
Geography of Detail DOL

- Occupational differences among places
Complex & Creative Labor

I. Goods & Services
   - Managerial Labor
III. Auxiliary Labor
IV. Creative Work
II. Managerial Labor

A. Managers
B. Business Services
C. Offices
D. Offshoring
Managers & Co.

- Executives
  - Top execs & layers of ‘mid-management’
- Supervisors
  - Bosses of work units/teams
- Specialists/technical
  - Accounting, legal, operations, personnel, IT, PR
- Clericals
  - Secretaries, typists, file clerks, mail room, etc.
Charting Management

Managing Director
(Ashok Kapasi)

Production & Planning
(Arun Kapasi)
(Vishwanath Pradhan)

H/R.
(M Vaghela)
(Neha Sharma)

Q.C.
(Ashok Kapasi)

Finance
(Vikram Kapasi)
(Mrudula Jain)

Marketing
(Arun Kapasi)
(Vikram Kapasi)

Director (Atul Raizada)

Chemical Testing
(Rajat Tyagi)
Spectro Analyzer
Positive Material Identification

Destructive Testing
(R.J. Chaudhray)
Tensile Testing.
V Charpy Impact Testing
IGC Testing
Micro Testing
Macro Testing

Non Destructive Testing
(Vinod K. Parekh)
(Basant Pradhan)
(Kanu D Parmar)

Ultrasonic Testing.
Dye Penetration
Magnetic Particle Testing.
Dimension Inspection
Marking / Stamping
Hardness Testing
Documentations.
II. Managerial Labor

A. Managers & Friends
B. Business Services
C. Offices
D. Offshoring
Make or buy... again

- Internal (corporate)
  - Management employees

- External (subcontract) = ‘Business services’
  - Business services growing rapidly

*Figure 1 Employment growth trends in the financial- and business-services sector*

*Source: Cambridge Econometrics (1994)*
Big 3 Biz Services

By census data

- Accounting
  - Keeping the books
    - Deloitte & Touche, KPMG, etc.

- Management consulting
  - Advice to top managers
    - McKinsey etc

- Information Technology (IT)
  - Technical services in computing & communications
    - IBM, Oracle, etc.
Management by consultation

praxes n.pl: practical application as distinguished from theory

Praxes Group
Outsourced Business Development

Your critical business challenges didn’t come to you in a package. That’s why we don’t offer you "pre-packaged" solutions.

Our commitment to our clients is that we will:

- Listen to you.
- Understand your short and long-term objectives.
- Understand your culture.
- Understand your products and services.
- Recommend and design a strategy that addresses challenges and root causes.
- Implement that strategy with you.
- Quantify success with you at critical points along the way.
- Be nimble and suggest tactical changes as appropriate.
- Focus on results, not "feel good" metrics.
- Help you grow your business.
II. Managerial Labor

A. Managers & Friends
B. Business Services
C. Offices
D. Offshoring
Offices

- Management workplace
  - Emergence > 1900
  - Dominance > 1950

- Specialized buildings
  - Skyscrapers, campuses

- Location
  - Downtown or suburban
Office districts

- Same logic as industrial districts
  - Interaction/access
  - Labor pool
  - Shared infrastructure
  - *Face-to-face contact*

- First noted in 1950s study of New York
  - Hoover & Vernon, *Anatomy of a Metropolis*
Business services & office clusters

- Business services clusters
  - Attorneys, advertisers, accountants, designers, etc.
  - Foundation of today’s big city Downtowns

NB: Consumer ‘business service’ clusters
- Small lawyers, tax preparers, real estate agents, etc.
- Like retail, near residences
II. Managerial Labor

A. Managers & Friends
B. Business Services
C. Offices
D. Offshoring
Sending business services abroad
To offshore or to onshore?

- IT subcontracting to India
  - Biggest companies are Wipro, InforSys & Tata Consultancy
- Paradoxically, Wipro setting up a center in Atlanta in 07.

“Falling dollar pushing up costs of outsourcing to India”

Sam Zuckerman, Chronicle Staff Writer
Tuesday, October 2, 2007
Complex & Creative Labor

I. Goods & Services
II. Managerial Labor
III. Auxiliary Labor
IV. Creative Work
III. Auxiliary Labor

A. Auxiliary Work
B. Design & Engineering
C. Marketing
D. Maintenance & Repair
Types of auxiliary labor

- Preparation
  - Design & engineering (B)
- Support (*not discussed*)
  - Repair & maintenance of machinery & workplaces
- Finishing (*see lec. 10*)
  - Packaging & testing
- Marketing
  - Mkt. Research & advertising (C)
- Post-production
  - Repair & maintenance (D)
Growth of auxiliary labor

- Absolute growth
  - Preparation
  - Marketing

- Relative growth
  - Support
  - Finishing
II. Auxiliary Labor

A. Auxiliary Work
B. Design & Engineering
C. Marketing
D. Maintenance & Repair
Long history of design

- Starts with Wedgewood in 1780s
  - Function over form in 19th century
- Systematic by 1920s
  - Clothing, autos, household machines, etc.
- Still crucial today
  - Even in ‘High Tech’
  - A. Forty, *Objects of Desire*
Design as competitive advantage

- Italian high fashion
  - Gucci, Versace, Genarra etc.
  - Centered in Milano

- Production offshoring, but not design
  - 50% of Italian production now done abroad
  - Shrinking textile districts
  - Silk @ Como, wool in NE Italy @ Biella
  - Cotton @ Varese, west of Milan
    - “the Manchester of Italy”
    - Employment fell by half, 1981-2001,
      - 54,000 to 27,000

- BUT: Italy still runs an export surplus of $10-12$B in textiles & clothing
Engineering

- Process engineering
  - Designing machinery & factories
  - Materials & labor flow

- Product engineering
  - Not just for consumer
  - Shape, materials, components etc.
  - E.g. computers
    - Precast plastic cases
    - Simpler circuit boards
    - Preassembled components
System design & engineering

- Electronics SOC (system on a chip)
  - Eliminates components, assembly
  - Demotes board & computer design
  - Cadence & Applied Materials
    - software for system chip design

- Ikea furniture
  - Simple pieces, little assembly
  - Elegant solutions & functionality
  - Easy Self-Assembly
    - The magic bolts
  - Flat packages for transport & storage
Design & engineering
...as business services (subcontracted)

Hasbrouck Engineering

FROM RAW MATERIALS TO THE LAB
FROM THE LAB TO FINISHED PRODUCTS
WE SERVE INDUSTRY DAILY

About Us - Who We Are
Aroma Chemical Industry
Specialty Chemical Industry
Turpentine and Tall Oil
Upgrading
VOC Control - Printing Industry
VOC Control - Building Products
Technology Transfers
Engineering Drawings
Contact Us

Our services include chemical process design, simulation and process control, and finally technology transfer and other chemical engineering support.
Designing cities

- Los Angeles, Silicon Valley, Paris & Milan
  - Designers & engineers for everything
    - E.g., 80% of chip design worldwide in SV

- Usual logic of industrial districts
  - Labor pool
  - Sharing ideas & action
  - Face-to-face contact

Allen Scott, The Cultural Economy of Cities
Harvey Molotch, Where Stuff Comes From
GM’s global designs

"Up until four or five years ago, it was like GM was four different car companies," [its design manager said]. "I mean, there was some interaction, but not a whole lot. The design studios in the individual regions were not linked.'

"Now, we have one global design studio. We can link up all 11 studios and simultaneously consider a design,...It really helps us understand the needs of the regions and what regional perspectives they can bring to the whole.” The result is a bigger pool of ideas from GM's design teams -- in Germany, Sweden, Australia, India, South Korea, Brazil, China, California and Michigan.

GM also rotates designers from studio to studio, much as administrative personnel can be rotated between international and domestic assignments.
II. Auxiliary Labor

A. Basic Labor
B. Design & Engineering
C. •Marketing
D. Maintenance & Repair
Marketing - key elements

- Product (Quality & Price)
  - Product as function & image
  - Integrating marketing with production

- Branding & advertising
  - Image & desire
  - Affinity & loyalty

- (Retailing & sales system)
  - See lecture 14
Integrating design & marketing

Problem of time & coordination
- How to work together?
- How to move quickly into production?

Solutions
- Sashimi model
- Project team model
- Listening Post model

Motorola's RAZR
- 'consumer experience design groups'
  - teams of designers, engineers, marketers & accountants
Advertising & branding

- Toying with desire
- Consuming life
- Brands & identification
- Get ‘em young
- Loyalty
Advertising industry

- Subcontracting ad campaigns
- Specialist firms

- Advertising districts
  - Madison Ave., Bangkok, Paris, SF, LA
II. Auxiliary Labor

A. Basic Labor
B. Design & Engineering
C. Marketing
D. • Maintenance & Repair
Repair ‘services’

- Misnomer
  - Not a direct labor service to a person
- ‘Follow-up’ labor on durable goods
  - Keep them in working order
  - Keep them clean & usable
- Kinds of durable goods
  - Office machines
  - Automobiles
  - Buildings
Geography of M&R – highly dispersed

- On-site @ business
  - Inside workers
  - Outside workers
    - Vendor rep (IBM, Xerox, etc.)
    - Contract maintenance (Cleaning services, factory repair)

- Repair & cleaning shops
  - Cars, clothing, TVs, etc.

- On-site @ home
  - Domestics (regular)
  - Contractors (intermittent)
    - Carpet cleaners, plumbers, etc.
Offshoring repair labor

- Technical back-up & product information

- Outsourcing call centers
  - India has 450 firms, with 350K workers, $5.2B revenue
  - 70% from US
  - Indian sitcom, ‘The Call Centre’
Complex & Creative Labor

I. Goods & Services
II. Managerial Labor
III. Auxiliary Labor
IV. Creative Work
Three trends

- Growth of information
- Smarter goods
- More creative workers

But I have my doubts....
IV. Creative Work

A. Information

B. Smart Goods

C. Smart Workers
Information

- Information essential to...
  - All production, circulation, & consumption

- Circulation of information
  - What, how, when, where, etc. of commodities
  - Flows along commodity chains
  - Moves through & between firms
  - Moves between buyers and sellers
Information Technology

- Communications
  - Systems of moving and storing data

- Progress in communications
  - Technology (telegraph, phone, fax, internet)
  - Investment (infrastructure)
  - Management of information
Information geography

- Communications networks (public & private)
- Cities & rapid information flows
- City systems & major pathways
- Expansion: Less time & longer distance
Information economy?

- Growth of information
  - Grows with mass of output
  - Grows more with globalization of economy
  - Grows faster with better management systems
  - Grows even faster with digital revolution

- What information?
  - Most of it is economic (prices, finance, deliveries, etc.)

- Information for whom?
  - Capitalists, managers, technicians, marketers, etc.
Information vs. knowledge

- Knowledge = wisdom + information
  - Or, theory + data

- All work takes knowledge
  - Knowledge is the ‘how’ of production
  - Technology = materialized knowledge

See lecture 13
IV. Creative Work

A. Information

B. • Smart Goods

C. Smart Workers
Smart Goods

- All goods carry information
  - Inscribed
  - Implicit
  - Accompanying

- Learning by using
  - Consumption as learning
Smarter goods

- Rising info content of goods
  - Internal to function
  - Imparted to user
  - Interactive learning

- Goods in the digital age
  - Embedded ‘brainpower’ of goods
Are they still goods?

- Triumph of the intangible?
  - Vast storage, output
  - Numbers, words, music, pictures, algorithms, etc.

- Stubborn persistence of things (goods)
  - Laptops, CDs, iPods, cameras
  - Vs. ‘Knowledge economy’
IV. Creative Work

A. Information

B. Smart Goods

C. · Smart Workers
Smart Workers

- Knowledge & skills
  - Technology embodied in people

- Education & training
  - Basis for learning -- but not enough

- Working smart
  - Key to better products & productivity
Creative workers

- Key skilled workers
  - ‘The Creative Class’? ‘Symbolic analysts’? 
    
    *Richard Florida, The Rise of the Creative Class*

- Where to find creative people?
  - Near universities?
  - In big cities?
What % of workers?

- Small elite depend on mass of workers
  - Social labor needs all its parts

- Most work remains dull & constrained
  - Despite rising level of education & skill
  - Paradox of work under capitalism

- What cost focusing on the few?
A knowledge-based economy?

- Strategy for developed nations
  - EU & US fears of NICs

- Utopian vision of capital
  - Science, knowledge & creativity
  - Without hard work or real workers